Recommended Next Steps
for Improving Quantitative Information
for the California Water Plan

September 15, 2005

Promoting Collaboration

Improving the Institutional Setting for Quantitative Work

Next Steps for DWR:

- DWR will take the lead to form a broader institutional network dedicated to the development and proper application of quantitative capability for water management needs throughout California. DWR will invite and encourage others to join this network.

- DWR will seek advice from the Water Plan Analytical Tools and Data Workgroup about how best to implement the work described in this paper and how best to interface with activities conducted by CWEMF.

Partnering on Near-Term Studies

1) DWR is working with the Rand Corporation to evaluate uncertainty in water management using the technique of Robust Decision Making.
2) DWR is working with the Natural Heritage Institute, the National Center for Atmospheric Research, and the Tellus Institute, to evaluate the effects of climate change on water management in California using the Water Evaluation and Planning System model, WEAP.

Next Steps for DWR:

- In collaboration with others, DWR submitted several proposals through the 2004 CALFED Science Proposal Solicitation Program that could serve as additional areas of investigation. Although these projects were not recommended for funding they can form the basis for future research. These proposals would develop decision support tools, improve linkages between existing models, improve the Integrated Groundwater Surface Water Model (IGSM2), and provide better estimates of evapotranspiration from agricultural lands and managed wetlands.

- DWR will work with the Analytical Tools and Data Workgroup to identify areas of key research interest for the next Water Plan update. DWR will seek out entities engaged in these key research areas and invite them to collaborate on mutually beneficial projects. DWR will pursue those projects where each side is willing and able to dedicate the required resources to implement the project.

- DWR's Water Plan and CALSIM III development staff are working to improve communication between DWR's data collection activities and its analytical capabilities.

- DWR is exploring the possibility of contracting with the University of California, Davis to apply the CALVIN model to develop and evaluate response packages to the scenarios described Water Plan Update 2005.

Facilitating Information Exchange

Next Steps for DWR:

- DWR will work with the Water Plan Analytical Tools and Data Workgroup to develop a strategy to exchange information. Keys tasks for information exchange include developing a common glossary of terms, water budget components, and guidelines for data collection, compilation, and management.

- DWR will meet with other agencies responsible for implementing data sharing programs to learn about the approaches used and challenges faced. Examples include MWD's Integrated Water Resource Plan, The Santa Ana Integrated Watershed Plan, the California Environmental Data Exchange Network, and the California Data Exchange Center.

- DWR will develop a web portal to link to or publish data used by the California Water Plan and the CALFED Bay-Delta Program Common Assumptions group. The initial focus will be on agriculture water use efficiency, urban water use efficiency, conjunctive management, water recycling, desalination, and water transfers. Information sources may include:

    - State water bond grant proposals
    - Agricultural Water Management Plans
    - 2005 update of Urban Water Management Plans
    - DWR's California Land and Water Use database and web portal
    - California Water Plan Water Portfolios
    - Later efforts may include information from City and County General Plans.

Improving Numbers for the California Water Plan

Next Steps for DWR:

- DWR will raise awareness and provide training for DWR staff and interested stakeholders in the areas of object-oriented thinking, the Rational Unified Process, and the Unified Modeling Language. An initial 1-day work shop will be held for program managers to provide an overview of these ideas. CWP will work with our stakeholders on how to use UML or other identified approaches for documenting the important factors and interrelationships that describe the water management system.

- DWR will work with the Analytical Tools and Data Workgroup to create a "high-level" conceptual design that describes urban water demand. This conceptual design will identify the components of the water management system necessary to compute urban water demand under various conditions. Examples of these components include demand forecasting, supply forecasting, and technology adoption. These component descriptions will be created and refined over time.